

The opinion in support of the decision being entered today was *not* written for publication in and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte PASQUALE A. PATULLO and THOMAS L. TROTTA

Appeal 2007-1315
Application 09/828,437
Technology Center 3600

Decided: July 3, 2007

Before JENNIFER D. BAHR, STUART S. LEVY, and ANTON W. FETTING,
Administrative Patent Judges.

FETTING, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF CASE

This appeal from the Examiner's rejection of claims 1-28, the only claims pending in this application, arises under 35 U.S.C. § 134. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 6(b) (2002).

We AFFIRM.

1 The Appellants invented a computerized reservation system (Specification 1).
2 An understanding of the invention can be derived from a reading of exemplary
3 claim 1, which is reproduced below.

4 1. A reservation system for making travel arrangements upon request
5 by a user, the system comprising:
6 means for determining whether the user is a direct customer or a travel
7 agent;
8 means for receiving travel parameters associated with a desired travel
9 option;
10 means for generating a listing of one or more travel arrangements in
11 accordance with the travel parameters, said listing including pricing
12 information associated with each respective travel arrangement; and
13 means for displaying the listing of the one or more travel
14 arrangements.

16 This appeal arises from the Examiner's Final Rejection, mailed January 12,
17 2006. The Appellants filed an Appeal Brief in support of the appeal on April 7,
18 2006, and the Examiner mailed an Examiner's Answer to the Appeal Brief on June
19 29, 2006. A Reply Brief was filed on August 29, 2006.

PRIOR ART

21 The prior art references of record relied upon by the Examiner in rejecting the
22 appealed claims are:

23	Lynch	US 6,018,715	Jan. 25, 2000
24	Jones	US 2002/0156661 A1	Oct. 24, 2002
25	Among	US 2003/0110063 A1	Jun. 12, 2003

REJECTIONS

Claims 1-12 and 25-27 stand rejected under 35 U.S.C. § 102(b) as anticipated by Lynch.

Claims 1-28 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Jones and Among.

ISSUES

The issues pertinent to this appeal are

- Whether the rejection of claims 1-12 and 25-27 under 35 U.S.C. § 102(b) as anticipated by Lynch is proper. In particular, this issue turns on whether Lynch shows determining whether the user is a direct customer or a travel agent.
 - Whether the rejection of claims 1-28 under 35 U.S.C. § 103(a) as unpatentable over Jones and Among is proper. In particular, this issue turns on whether Jones and Among may properly be combined, whether the claimed subject matter the Appellants contend is missing from Jones and Among is actually in those references or would have otherwise been obvious to have incorporated into the combination of Jones and Among, and whether the claim limitations of specific information printed or displayed on a travel itinerary listing and billing are nonfunctional descriptive material, and if so, how much patentable weight is to be afforded to those limitations.

1 FACTS PERTINENT TO THE ISSUES

2 The following enumerated Findings of Fact (FF), supported by substantial
3 evidence, are pertinent to the above issues.

4 *Lynch*

5 01. *Lynch* is directed toward an automated travel planning system that
6 includes a database which stores information relating to each individual
7 traveler and business entity customer of a travel agency and also
8 information relating to the travel agency itself. This information may
9 include, for example, data about the frequent flyer/renter programs in
10 which each traveler participates, smoking and seating preferences for the
11 travelers, preferred travel vendors of each business entity, restrictions on
12 fare classes (e.g., business or coach classes only) imposed by each
13 business entity on its employees, and any promotions available to a
14 travel agency. When travel request information is received from a
15 specific customer (individual and/or business entity) of the travel
16 agency, the system automatically retrieves information relating to the
17 customer(s) from the database and also information relating to the travel
18 agency. The system preferably uses the retrieved information to
19 determine a travel plan or policy that is satisfactory to the individual
20 customer who is traveling, the business entity customer which employs
21 the individual (if applicable), and the travel agency. (*Lynch*, col. 1, l. 61
22 – col. 2, l. 15.)

23 02. *Lynch* determines the identity of the traveler, the business entity
24 which employs the traveler (if applicable), and the travel agency of
25 which the individual is a customer (if applicable). “Preferably, if the

1 individual for whom travel arrangements are being made is an existing
2 customer of the travel agency, the identities of the business entity and
3 the travel agency are accessed automatically from the relational database
4 when the name of the individual is input into system 10. Otherwise, if
5 the individual is a new customer, system 10 may prompt the travel agent
6 to input information relating to the individual and his/her employer, such
7 as, for example, the name and address of the individual, the name and
8 address of the individual's employer, any frequent flyer or renter
9 programs in which the individual participates, any travel services
10 vendors preferred by the employer, etc. This individual and business
11 entity information can be stored in database 14 for future use.” (Lynch,
12 col. 5, ll. 30-48.)

13 *Jones*

- 14 03. Jones is directed toward processing travel requests based on a user's
15 travel destination goal. That is, the user inputs a travel goal (e.g., the
16 time and location of a meeting) and the system automatically generates a
17 travel itinerary, including flight information, hotel information, and
18 ground transportation such as rental cars, to ensure that the user
19 accomplishes their travel goal (e.g., arrives at the meeting on time).
20 (Jones, ¶ [0007].)
- 21 04. Jones describes a data processing system 50 having a user computer
22 100 connected to travel computer 120 via a communication link 150,
23 such as a direct network link, a modem, or the Internet. The travel
24 computer 120 is connected to a computerized reservation system (CRS)

1 130 via communication link 160. Both the travel computer 120 and CRS
2 130 have access to a travel database 140. (Jones, ¶ [0033].)

3 05. Jones describes an exemplary process in FIG. 2a. “First, the travel
4 system 114 receives travel parameters from the user of the user computer
5 100 via the presentation program 108 (step 200). FIG. 2b shows an
6 example initial screen displayed by the presentation program 108 to the
7 user. Using this screen, the user may enter destination information such
8 as an address, city, state, and time of appointment. After receiving the
9 parameters, travel system 114 invokes the air transportation subsystem
10 116 to select flights or flights and prices (step 210). Travel system 114
11 then determines whether an overnight stay is necessary by determining
12 whether the departure and return dates are the same (step 220). If
13 different, the hotel subsystem 118 is invoked to select a hotel (step 230).
14 The travel system 114 then determines whether it has received an
15 indication from the presentation program of whether the user wants
16 activity and restaurant information (step 235). If the user requests
17 activity and restaurant information, the travel system 114 invokes the
18 activity and restaurant subsystem 122 to find restaurants and activities in
19 the vicinity of the selected hotel or the destination site (step 240). After
20 invoking the activity and restaurant subsystem 122 (step 240), or if the
21 user does not want activity and restaurant information (step 235), travel
22 system 114 invokes the ground transportation subsystem 124, which
23 allows the user to select ground transportation such as cars (step 250).
24 Finally, travel system 114 invokes the reservation confirmation system

1 128 allowing the user to verify travel selections and confirm reservations
2 with the providers (step 260)." (Jones, ¶ [0040].)

3 06. Jones describes how, based on the user's preferred arrival time at the
4 destination and knowing the minimum and maximum time for ground
5 travel between the destination airport and the destination, ATS 116 can
6 calculate a flight arrival time at the destination airport. "ATS 116 then
7 searches travel database 140 for flights from the origination airport to the
8 destination airport that arrive at the flight arrival time to find flight
9 alternatives available to the user and sends this information to the
10 presentation program for display to the user (step 340). The presentation
11 programs also display seat alternatives for the available flights." (Jones,
12 ¶ [0043].)

13 07. Jones describes how it recommends hotels in FIG. 4a. "HS 118
14 recommends hotels based on their proximity to the destination and any
15 other parameters either set by the user or held in a user profile (step
16 400). HS 118 sends presentation program 108 a map for display that
17 shows the location of the hotel (step 410). Geographic databases are
18 commonly available that show streets and other landmarks. Also
19 included in the display data is other information available in the database
20 140 about the hotel including hotel amenities (step 420). FIG. 4b shows
21 a map including the location of the selected hotel relative to the location
22 of the destination (i.e., the marker for "Your Appointment"), and
23 information about the hotel. HS 118 receives data from presentation
24 program 108 indicating whether the user has accepted one of the
25 recommendations or rejected all of them (step 430). The user may

1 accept one of the recommendations or reject all the recommendations. If
2 the user does not accept any of the recommendations, the CR 126 re-
3 executes searches using relaxed constraints and is used here to look for a
4 larger range of hotels (step 440) and processing continues with step 400.
5 If HS 118 determines that the user selected a hotel, then HS 118 reserves
6 the hotel using CRS 130 (step 450) and the itinerary is updated (step
7 460).” (Jones, ¶ [0047].)

8 08. Jones describes an embodiment of a search based on pricing in its
9 description of its car rental selection. “In FIG. 5a, GTS 124 sends
10 display data to presentation program 108 providing the user the option of
11 renting a car (step 510). If the user decides to rent a car, then GTS 124
12 sends display data representing rental car recommendations found in
13 travel database 140 (step 515). FIG. 5b shows an example display on
14 display 106 by presentation program 108 showing a rental car company
15 and information about the car and allows the user the option of reserving
16 it. The user may then select a rental car (step 516) and a reservation is
17 made (step 518). After making the reservation, the rental car is added to
18 the itinerary (step 519). If the user did not select any of the displayed
19 rental car recommendations, then GTS 124 invokes CR 126, broadening
20 the scope of the search for the rental car recommendations by relaxing
21 any constraints such as cost (step 517).” (Jones, ¶ [0049].)

22 09. Jones describes returning cost and other descriptive data regarding
23 restaurant choices in FIG. 6a. “ARS 122 refers to a database of
24 restaurants and activities and their addresses held within travel database
25 140. If a user desires to select a restaurant (step 600) then ARS 122

1 sends display data to presentation program 108 to display a screen
2 depicting restaurants by searching for geographically close restaurants to
3 the hotel or destination and searching any other constraints entered by
4 the user such as the type of food, amenities, ratings in the travel database
5 (step 610). In this step, ARS 122 sends display data to presentation
6 program 108 which displays a screen like the one shown in FIG. 6B.
7 This screen depicts various restaurants and various features of the
8 restaurants, like average meal cost, level of cleanliness, type of food, etc.
9 The user makes various selections on this screen and the activity and
10 restaurant subsystem performs various processing in response to these
11 selections.” (Jones, ¶ [0053].)

12 *Among*

- 13 10. Among is directed toward managing a tour product purchase, and
14 more specifically, toward permitting buyers to select a final option that
15 includes customized components and multi-site reservations and vendors
16 to directly manage tour product inventory online and in real-time.
17 (Among, ¶ [0003].)
- 18 11. Among states that one of the objects of its invention is to give a
19 potential buyer the ability to instantly mix and match suboptions for
20 various components, and then easily mix and match additional
21 suboptions for other components to compare price conveniently.
22 (Among, ¶ [0014].)
- 23 12. Among describes the informational transfer included in its flight
24 information process, such that flight information and airline flight
25 inventory 109 may be housed on an external database 110, accessed by

1 interfacing with a prior art Central Reservation System (CRS) booking
2 engine to enable real time flight class availability. "FIG. 2 illustrates a
3 vendor update system according to the preferred embodiment of the
4 present invention. Vendor access to a central server 105 is a key that
5 makes the system work smoothly. Vendors may directly adjust
6 inventory levels in a number of ways. For example, vendors may close
7 out certain dates that are not available for sale by clicking on a specific
8 date on a calendar displayed on a vendor interface 201, 202, 203, 204
9 close out a specified range of dates, adjust price levels for a specific date
10 or a range of dates, or offer a "block" of rooms at a certain price that
11 would be decremented as the number of rooms are sold." (Among, ¶
12 [0040].)

- 13 13. Among describes an embodiment of providing information relative to
14 travel option availability in its description of how direct inventory
15 control of suboptions by vendors removes the prior art "middleman"
16 from the procedure. "All data input by vendors is stored in a master
17 database, 108 on the central server 105. The invention allows timely and
18 fresh data to be available for anyone wishing to purchase a travel
19 package. Accordingly, only products that are actually available are
20 displayed. For example, if a suboption such as a hotel property or
21 specific car type from a certain car company is sold out for a particular
22 day desired by a prospective buyer, the unavailable suboption will not be
23 offered for that component." (Among, ¶ [0042].)
- 24 14. Among states that, "[i]n addition to sending confirmation messages to
25 the vendors 602, a confirmation message (e.g., email) is also sent to any

1 travel agent 606 that booked the package or suboptions of the final
2 option, and to the buyer 604,607, if the buyer's contact information (e.g.,
3 email address) is available. A follow-up daily reconciliation message
4 (e.g., email or fax) is also sent to all vendors at the end of each day re-
5 listing all bookings of suboptions selected as part of a final option made
6 that day as a verification.” (Among, ¶ [0051].)

7

8 PRINCIPLES OF LAW

9 *Claim Construction*

10 The general rule is that terms in the claim are to be given their ordinary and
11 accustomed meaning. *Johnson Worldwide Assocs. v. Zebco Corp.*, 175 F.3d 985,
12 989, 50 USPQ2d 1607, 1610 (Fed. Cir. 1999). In the USPTO, claims are
13 construed giving their broadest reasonable interpretation.

14 [T]he Board is required to use a different standard for construing
15 claims than that used by district courts. We have held that it is error
16 for the Board to “appl[y] the mode of claim interpretation that is used
17 by courts in litigation, when interpreting the claims of issued patents
18 in connection with determinations of infringement and validity.” *In re*
19 *Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320 (Fed. Cir. 1989); *accord*
20 *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023 (Fed. Cir. 1997)
21 (“It would be inconsistent with the role assigned to the PTO in issuing
22 a patent to require it to interpret claims in the same manner as judges
23 who, post-issuance, operate under the assumption the patent is
24 valid.”). Instead, as we explained above, the PTO is obligated to give
25 claims their broadest reasonable interpretation during examination.

26 *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827,
27 1830 (Fed. Cir. 2004).

1 *Anticipation*

2 "A claim is anticipated only if each and every element as set forth in the claim
3 is found, either expressly or inherently described, in a single prior art reference."
4 *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d
5 1051, 1053 (Fed. Cir. 1987). "When a claim covers several structures or
6 compositions, either generically or as alternatives, the claim is deemed anticipated
7 if any of the structures or compositions within the scope of the claim is known in
8 the prior art." *Brown v. 3M*, 265 F.3d 1349, 1351, 60 USPQ2d 1375, 1376 (Fed.
9 Cir. 2001). "The identical invention must be shown in as complete detail as is
10 contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236,
11 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as
12 required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of
13 terminology is not required. *In re Bond*, 910 F.2d 831, 832, 15 USPQ2d 1566,
14 1567 (Fed. Cir. 1990).

15 *Obviousness*

16 A claimed invention is unpatentable if the differences between it and the prior
17 art are "such that the subject matter as a whole would have been obvious at the
18 time the invention was made to a person having ordinary skill in the art." 35 U.S.C.
19 § 103(a) (2000); *In re Kahn*, 441 F.3d 977, 985, 78 USPQ2d 1329, 1334 (Fed. Cir.
20 2006) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 13-14, 148 USPQ 459, 464-
21 65 (1966)). In *Graham*, the Court held that that the obviousness analysis begins
22 with several basic factual inquiries: "[1] the scope and content of the prior art are
23 to be determined; [(2)] differences between the prior art and the claims at issue are
24 to be ascertained; and [(3)] the level of ordinary skill in the pertinent art resolved."
25 383 U.S. at 17, 148 USPQ at 467. After ascertaining these facts, the obviousness

1 of the invention is then determined “against th[e] background” of the *Graham*
2 factors. *Id.* at 17-18, 148 USPQ at 467.

3 The Federal Circuit has repeatedly recognized that to establish a *prima facie*
4 case of obviousness, the references being combined do not need to explicitly
5 suggest combining their teachings. See e.g., *Kahn*, 441 F.3d at 987-88, 78
6 USPQ2d at 1336 (“the teaching, motivation, or suggestion may be implicit from
7 the prior art as a whole, rather than expressly stated in the references”); and *In re*
8 *Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988) (“for the
9 purpose of combining references, those references need not explicitly suggest
10 combining teachings”). The court recently noted,

11 An explicit teaching that identifies and selects elements from different
12 sources and states that they should be combined in the same way as in
13 the invention at issue, is rarely found in the prior art. As precedent
14 illustrates, many factors are relevant to the motivation-to-combine
15 aspect of the obviousness inquiry, such as the field of the specific
16 invention, the subject matter of the references, the extent to which
17 they are in the same or related fields of technology, the nature of the
18 advance made by the applicant, and the maturity and congestion of the
19 field.

20 *In re Johnston*, 435 F.3d 1381, 1385, 77 USPQ2d 1788, 1790 (Fed. Cir. 2006).

21 The Supreme Court has provided guidelines for determining obviousness based
22 on the Graham factors. *KSR Int'l v. Teleflex Inc.*, 127 S.Ct. 1727, 82 USPQ2d 1385
23 (2007) “[a] combination of familiar elements according to known methods is likely
24 to be obvious when it does no more than yield predictable results. *Id.* at 1731, 82
25 USPQ2d at 1396. “When a work is available in one field of endeavor, design
26 incentives and other market forces can prompt variations of it, either in the same
27 field or a different one. If a person of ordinary skill can implement a predictable
28 variation, §103 likely bars its patentability.” *Id.* For the same reason, “if a

1 technique has been used to improve one device, and a person of ordinary skill in
2 the art would recognize that it would improve similar devices in the same way,
3 using the technique is obvious unless its actual application is beyond that person's
4 skill." *Id.* at 1740, 82 USPQ2d 1396. "Under the correct analysis, any need or
5 problem known in the field of endeavor at the time of invention and addressed by
6 the patent can provide a reason for combining the elements in the manner
7 claimed." *Id.* at 1742, 82 USPQ2d at 1397.

8 *Obviousness of Automation*

9 It is generally obvious to automate a known manual procedure or mechanical
10 device. Our reviewing court stated in *Leapfrog Enterprises Inc. v. Fisher-Price*
11 *Inc.*, 485 F.3d 1157, 82 USPQ2d 1687 (Fed. Cir. 2007) that one of ordinary skill in
12 the art would have found it obvious to combine an old electromechanical device
13 with electronic circuitry "to update it using modern electronic components in order
14 to gain the commonly understood benefits of such adaptation, such as decreased
15 size, increased reliability, simplified operation, and reduced cost. ... The
16 combination is thus the adaptation of an old idea or invention ... using newer
17 technology that is commonly available and understood in the art." *Id.* at 1161-62,
18 82 USPQ2d at 1691.

19 *Obviousness and Nonfunctional Descriptive Material*

20 Descriptive material can be characterized as either "functional descriptive
21 material" or "nonfunctional descriptive material." Exemplary "functional
22 descriptive material" consists of data structures¹ and computer programs, which

¹ The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." *The New IEEE Standard Dictionary of Electrical and Electronics Terms* 308 (5th ed. 1993).

1 impart functionality when employed as a computer component. “Nonfunctional
2 descriptive material” includes but is not limited to music, literary works and a
3 compilation or mere arrangement of data.

4 When presented with a claim comprising descriptive material, an Examiner
5 must determine whether the claimed nonfunctional descriptive material should be
6 given patentable weight. The Patent and Trademark Office (PTO) must consider
7 all claim limitations when determining patentability of an invention over the prior
8 art. *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983). The
9 PTO may not disregard claim limitations comprised of printed matter. *See*
10 *Gulack*, 703 F.2d at 1384-85, 217 USPQ at 403; *see also Diamond v. Diehr*, 450
11 U.S. 175, 191, 209 USPQ 1, 10 (1981). However, the examiner need not give
12 patentable weight to descriptive material absent a new and unobvious functional
13 relationship between the descriptive material and the substrate. *See In re Lowry*,
14 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994); *In re Ngai*, 367
15 F.3d 1336, 1338, 70 USPQ2d 1862, 1863-64 (Fed. Cir. 2004).

16 Thus, when the prior art describes all the claimed structural and functional
17 relationships between the descriptive material and the substrate, but the prior art
18 describes a different descriptive material than the claim, then the descriptive
19 material is nonfunctional and will not be given any patentable weight. That is,
20 such a scenario presents no new and unobvious functional relationship between the
21 descriptive material and the substrate.

1 ANALYSIS

2 *Claims 1-12 and 25-27 rejected under 35 U.S.C. § 102(b) as anticipated by Lynch.*

3 The dispositive issue in this rejection is whether Lynch discloses the claim
4 feature of determining whether the user is a direct customer or a travel agent.

5 The Examiner found that Lynch discloses a reservation system for making
6 travel arrangements upon request by a user, and that it has a means for determining
7 whether the user is a direct customer or a travel agent in Figure 1's Decision
8 Engine (16) and Fig. 3's process (106) "DETERMINE TRAVELER, BUSINESS
9 ENTITY AND AGENCY ASSOCIATIONS" and its related description (Lynch,
10 col. 5, ll. 31-35). (Answer 4-5.)

11 The Appellants contend that Lynch does not disclose the claim feature of
12 means for determining whether the user is a direct customer or a travel agent. They
13 argue that nowhere does Lynch ever state that the system determines whether the
14 user is a direct customer or a travel agency. Instead, they argue that Lynch's
15 system presumes that the traveler is associated with a business entity. (Br. 13.)

16 The Examiner argues (1) that the result of this determination is not used within
17 the claim (Answer 26), (2) that Lynch discloses a means for determining whether
18 the user is a direct customer or a travel agent as the Examiner found, *supra*,
19 (Answer 27-28), and (3) that given the broadest reasonable interpretation, the
20 determination of whether a user is a travel agent or a direct customer is a
21 determination of the identity of the user (Answer 38).

22 The Examiner's first argument is irrelevant in a rejection under anticipation.
23 Each structural element in a system claim must be shown within the applied art to
24 establish anticipation. A system element that causes a determination is structural
25 because it is an element that the data must pass through and be executed upon.

1 The Examiner's second argument is unpersuasive. Lynch determines the
2 identity of the traveler, the business entity which employs the traveler (if
3 applicable), and the travel agency of which the individual is a customer (if
4 applicable) (FF 02). While this teaching explicitly states that the identity of these
5 three parties are determined, this does not explicitly, implicitly, or inherently state
6 that the system actually determines whether the user is a direct user or a travel
7 agent.

8 The Examiner's third argument is not credible. Determining identity ends in a
9 textual result. Determining whether the identified entity is a direct customer or a
10 travel agent ends in a Boolean result.

11 Thus, we find that the Appellants' arguments persuasive that Lynch does not
12 show determining whether the user is a direct customer or a travel agent.

13 This conclusion alone is sufficient to overcome a rejection under novelty, and
14 therefore the remaining arguments made by the Appellants are moot.

15
16 *Claims 1-28 rejected under 35 U.S.C. § 103(a) as obvious over Jones and Among.*

17
18 *Nonfunctional Descriptive Material*

19
20 All of the claims include a limitation of generating a listing and describing
21 the contents of that listing. Several of the claims also include a limitation of
22 displaying and describing the contents of the display. The contents of the listing
23 and display are all descriptive textual information or graphic images provided to a
24 traveler. None of these textual information or graphic images have any functional

1 relation to the rest of the claim other than they are what the claimed subject matter
2 presents in the listing and graphic displays. Thus they are both nonfunctional and
3 descriptive material.

4 The Appellants contend that the contents of the listing and display further
5 define the structure of their system. The Appellants analogize their listing and
6 display contents to programming that creates a new machine. The Appellants
7 finally argue that the relation between the travel parameters and the listing and
8 display contents constitutes a physical organization on the computer memory. (Br.
9 16-17).

10 While creative, this argument is unpersuasive. First, by this argument, a
11 computer with a copy of the latest novel on its hard drive would patentably
12 distinguish over another computer with a different novel. The organization of the
13 bits and bytes would differ between the two machines, but not in any functional
14 manner. In contrast, *In re Alappat*, 33 F.3d 1526, 31 USPQ2d 1545 (Fed. Cir.
15 1994), cited by the Appellants, referred to a high level software program recitation
16 within its claim, and *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir.
17 1994), also cited by the Appellants, referred to a functional data structure whose
18 structure was recited within its claim. The contents of the Appellants' listing and
19 display recite neither a computer program nor a functional data structure; they are
20 descriptive material that bear no functional relation to the remainder of the claim.
21 Thus, they are nonfunctional descriptive material.

22 As such, the contents of the listing and display are considered, but given no
23 patentable weight, and they will not patentably define the claimed subject matter
24 over the prior art.

1 *Independent Claims 1, 13, 25, and 28*

2 We note that the Appellants argue claims 1 and 13 as a group. Accordingly,
3 we select claim 1 as representative of the group. We further note that the
4 Appellants' arguments regarding claim 28 are the same as those for claim 1 and we
5 therefore include claim 28 in this group. The Appellants have not separately
6 argued independent claim 25, or dependent claim 5 and 17, which depend from
7 claim 1 and 13, and we therefore include these claims in this group as well.

8 The Examiner found that Jones discloses a method and system for making
9 travel arrangements using a computer network that includes receiving travel
10 parameters associated with a desired travel option; generating a listing of one or
11 more travel arrangements in accordance with the travel parameters including
12 pricing information associated with the travel parameters; and displaying the
13 listing of the one or more travel arrangements. The Examiner found that Jones
14 does not disclose determining whether the user is a direct customer or a travel
15 agent (Answer 10-11).

16 To overcome this deficiency, the Examiner found that Among discloses a step
17 of determining who the user is and if a passenger is identified as qualified for
18 special pricing, and automatically applying a rate if qualified and sending
19 confirmation messages to travel agent and the buyer. The Examiner concluded that
20 it would have been obvious to one of ordinary skill to combine Among with Jones
21 since, by identifying the user, the travel planning method and system of Jones can
22 access special pricing information and other benefits (Answer 11).

23 The Appellants contend that Among fails to disclose the claim feature of
24 determining whether the user is a direct customer or a travel agent (Br. 26-27).
25 The Appellants further contend that the Examiner has shown no objective rationale

1 from the references themselves for combining Jones with Among. They also
2 contend that the stated motivation would not lead to Appellants' claimed invention
3 because the proposed modification would render the prior art unsatisfactory for its
4 intended purpose and would change the principle of operation of a reference (Br.
5 24).

6

7 *Automation of a Known Process*

8

9 We initially note that the subject matter of the independent claims 1, 13, and 28
10 are for the combination of first determining whether one who books arrangements
11 is a traveler or a travel agent and then automating the solicitation of travel
12 preferences and the provision of travel pricing information that any traveler would
13 likely require. In any manual procedure existing at the time of the invention, one
14 of ordinary skill would have known that a travel service provider had to ascertain
15 whether a party the provider was in communication with would be charging a
16 commission or not, i.e., whether the party was an agent who charged a
17 commission, because of the prevailing industry practice of paying commissions to
18 travel agents.

19 It is generally obvious to automate a known manual procedure or mechanical
20 device, because one of ordinary skill in the art would have found it obvious to
21 combine an old device or procedure with electronic circuitry to update it using
22 modern electronic components in order to gain the commonly understood benefits
23 of such adaptation, such as decreased size, increased reliability, simplified
24 operation, and reduced cost. The combination of automation and the usual queries
25 and responses of travel service providers is thus the adaptation of an old idea or

1 invention using newer technology that is commonly available and understood in
2 the art. *See Leapfrog, supra.*

3

4 *Jones and Among*

5 Unlike Lynch, Among does determine whether the user is a travel agent or
6 direct user. Among explicitly states that a confirmation message (e.g., email) is
7 also sent to any travel agent that booked the package or suboptions of the final
8 option (FF 14). Thus, we find that Among determines whether the user is a travel
9 agent or a direct user.

10 As to the Appellants' contention that there is no motivation to combine Among
11 and Jones, Jones is directed toward processing travel requests based on a user's
12 travel destination goal (FF 03) and Among is directed toward managing a tour
13 product purchase (FF 10). The teaching, motivation, or suggestion may be implicit
14 from the prior art as a whole, rather than expressly stated in the references, *see*
15 *Kahn, supra*. As the Examiner concluded, by identifying the user, Jones can
16 access special pricing information, any incentives, and commission payments that
17 may be available to the user, thus affecting the price of any reservation, and also
18 allows for tracing of sales by an individual or by an entity and aids travel agents in
19 managing commission payments.

20 The Appellants' argument as to why the combination of Among and Jones
21 would be unsuitable is that in such a combination the travel agent's itinerary, as
22 opposed to the user's itinerary, would be entered (Br. 25). This is simply not a
23 credible argument. Clearly, when a travel agent is a user of a system, the travel
24 agent is going to enter the itinerary of the client, not a fictitious travel agent
25 itinerary.

1 As to the Appellants' argument that the combination would change the
2 principle of operation, citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA
3 1959), while *Ratti* held that a combination of references that would require a
4 substantial reconstruction and redesign of the elements shown the prior art as well
5 as a change in the basic principles under which the prior art was designed to
6 operate is not a proper ground for an obviousness rejection, 270 F.2d at 813, 123
7 USPQ at 352, what *Ratti* was referring to was reconstruction and redesign of how
8 all the elements interrelate in a manner relying on operational principles
9 unforeseeable to a person of ordinary skill.

10 In *Ratti*, claims were directed to an oil seal comprising a bore engaging portion
11 with outwardly biased resilient spring fingers inserted in a resilient sealing
12 member. The primary reference relied upon in a rejection based on a combination
13 of references disclosed an oil seal wherein the bore engaging portion was
14 reinforced by a cylindrical sheet metal casing. Its seal was incompressible and the
15 device required rigidity for operation, whereas the claimed invention required
16 resiliency.

17 But Jones' processing travel requests based on a user's travel destination goal
18 (FF 03), coupled with Among's managing a tour product purchase (FF 10), would
19 not do such violence to the operating principles of Jones. Modifications by
20 substitution, even if they omit the subject matter portion which a prior art patentee
21 apparently regarded as his contribution to the art along with such advantages as it
22 might provide, where the modified apparatus is obvious in view of the prior art and
23 where the retained portion of the subject matter will operate on the same principles
24 as before, "are not authority for holding a rejection improper under such
25 circumstances." *In re Umbarger*, 407 F.2d 425, 430-31, 160 USPQ 734, 738

1 (CCPA 1959), distinguishing *Ratti*. In this case, modifying Jones by substituting
2 Among's tour travel package for Jones' piece by piece travel package still operates
3 on the principles of both Jones and Among, and the combination produces travel
4 option listings in response to travel parameters, as needed in Jones, Among, and
5 the claimed invention.

6 Thus, we find the Appellants' arguments unpersuasive and that the Examiner
7 has shown that as to the independent claims, all of the claim limitations are found
8 in the combined teachings of Among and Jones, and that it would have been
9 obvious to a person of ordinary skill in the art to have combined Among and Jones
10 to arrive at the claimed subject matter.

11

12 *Dependent Claims*

13 *Application of Among and Jones to the Dependent Claims*

14
15 *Claims 2 and 14*

16 The Appellants separately argue claims 2 and 14 together, which call for room
17 pricing and airfare category contents in the printed listing.

18 The Examiner found that Jones shows listing room accommodations and
19 pricing, but not with airfare categories and that Among shows individual package
20 component prices which include airline price data and hotel price data, and that
21 suboptions are generated and priced for selected travel components. The Examiner
22 concluded that it would have been obvious to one of ordinary skill to combine
23 Among's package components with the travel planning disclosure of Jones since
24 this would have allowed the customer to see that the customer is getting a better

1 discount by booking flights and accommodations together in a package as opposed
2 to making several independent reservations. (Answer 12-13).

3 The Appellants contend that Among teaches that the server compiles the
4 suboption prices, and then returns a lowest priced option (although several lowest
5 price options might be returned). Therefore, a complete package price is returned;
6 not a breakdown of individual package component prices (Br. 28-29).

7 As we concluded above, no patentable weight is afforded the contents of the
8 listing, and so these limitations will not define the claims over the art applied. But
9 even were patentable weight given to these nonfunctional descriptive material
10 limitations, Among states that it gives the potential buyer the ability to instantly
11 mix and match suboptions for various components, and then easily mix and match
12 additional suboptions for other components to compare price conveniently (FF 11).
13 Jones shows listing room information (07) and one or more airfare category fares
14 (FF 05). Clearly mixing and matching Jones' fares according to Among would
15 arrive at the claimed combination, which one of ordinary skill could implement as
16 a predictable variation, and would see the benefit of doing so.

17 Therefore, we find the Appellants' arguments unpersuasive.

18 The Appellants have not separately argued claims 3 and 11, which depend
19 from claim 2, and claims 15 and 23, which depend from claim 14, and they are
20 therefore treated as part of this group.

21

22 *Claims 4 and 16*

1 The Appellants separately argue claims 4 and 16 together, which call for name,
2 date, location, and guest quantity travel parameters, and for children in hotel room
3 restriction information in the printed listing.

4 The Examiner found that Jones discloses travel parameters including
5 accommodation name, arrival date, departure date, departure location, and number
6 of guests. The Examiner further found that such an indication of whether children
7 are allowed was non-functional descriptive data and that this descriptive data
8 would not distinguish the claimed invention from the prior art in terms of
9 patentability. The Examiner further found the notoriety of travel services
10 providing all pertinent information, which would include any restriction regarding
11 children. (Answer 13-14).

12 The Appellants contend that the combination of Jones and Among fails to
13 disclose the claim feature of the listing providing information relating to whether
14 children are allowed at the named accommodation, as admitted by the Examiner.
15 The Appellants also take issue with the Examiner's finding that the travel
16 parameter of whether children are allowed is determined to be non-functional
17 descriptive data, not functionally related to the steps or method. (Br. 29-30).

18 As we concluded above, no patentable weight is afforded the contents of the
19 listing, and so these limitations will not define the claims over the art applied. But
20 even were patentable weight given to these nonfunctional descriptive material
21 limitations, Jones states that information about the hotel is provided (FF 07). One
22 of ordinary skill could implement this by providing all relevant information,
23 including all restrictions, and particularly including any regarding children, as a
24 predictable variation, and would see the benefit of doing so, to properly inform
25 travelers. As to the travel parameters recited in claim 16, these are typical of the

1 type of parameters any travel service provider would collect, such as is done by
2 Jones (FF 05).

3 Therefore, we find the Appellants' arguments unpersuasive.

4

5 *Claims 6 and 18*

6 The Appellants separately argue claims 6 and 18 together, which call for airline
7 pricing without regard to seating availability in the listing.

8 The Examiner found that Jones discloses showing available flights and their
9 times and flights, although neither Jones nor Among pricing information without
10 regard to availability of seating. However, the Examiner concluded that it would
11 have been obvious to one of ordinary skill to provide pricing information without
12 regard to airfare so as to allow a user to obtain a sense of the market prior to
13 beginning the process of making travel arrangements or planning for a vacation.
14 The Examiner further found the data in the listing to be non-functional descriptive
15 data, and this descriptive data would not distinguish the claimed invention from the
16 prior art in terms of patentability, (Answer 15-16).

17 The Appellants contend that the combination of Jones and Among fails to
18 disclose the claim feature of the pricing information associated with the one or
19 more categories of airfare being provided without regard to availability of seating,
20 as admitted by the Examiner. The Appellants also take issue with the Examiner's
21 finding that the data in the listing is determined to be non-functional descriptive
22 data, not functionally related to the steps or method. (Br. 30.)

23 As we concluded above, no patentable weight is afforded the contents of the
24 listing, and so these limitations will not define the claims over the art applied. But

1 even were patentable weight given to the nonfunctional descriptive material
2 limitations, Among describes its listing of only available data for the purpose of
3 being timely (FF 13). One of ordinary skill could have implemented this by also
4 providing options irrespective of availability as a predictable variation, and would
5 see the benefit of doing so, for travelers for whom cost was more important than
6 timeliness.

7 Therefore, we find the Appellants' arguments unpersuasive.

8

9 *Claims 7 and 19*

10 The Appellants separately argue claims 7 and 19 together, which call for
11 determining seating availability after selecting the travel arrangement.

12 The Examiner found that Jones discloses accessing an associated computer
13 network to determine the availability of seating after selection of a listed travel
14 arrangement (Jones, ¶ [0044]-[0045]). (Answer 16.)

15 The Appellants contend that the combination of Jones and Among fails to
16 disclose this feature (Br. 31).

17 Jones displays seat alternatives for the available flights, which must be selected
18 first (FF 06). Thus, after selecting an available flight as a travel arrangement, seat
19 availability is shown for determination.

20 Therefore, we find the Appellants' arguments unpersuasive.

21 The Appellants have not separately argued claims 8-10, which depend from
22 claim 7, and claims 20-22, which depend from claim 19, and we treat them as part
23 of this group.

1 *Claims 12 and 24*

2 The Appellants separately argue claims 12 and 24 together, which call for
3 generating a confirmed travel arrangement listing without receipt of payment, and
4 that the contents of the listing show amounts due net of agency commission.

5 The Examiner found that Jones discloses a method and system further
6 comprising generating a confirmed travel arrangement without receipt of payment
7 for the travel arrangement (Jones, ¶ [0056]). (Answer 17-18.) The Examiner
8 further found that, because Jones does not show a payment in Fig. 7, referred to in
9 this portion of Jones, this process is without receipt of payment (Answer 49), and
10 that the amounts shown as due by service providers would have been net of
11 commission to avoid double billing (Answer 50).

12 The Appellants contend that the combination of Jones and Among fails to
13 disclose the claim features. They contend that the Examiner-cited paragraph
14 [0056] in Jones fails to disclose generating a confirmed travel arrangement as per
15 the claim, but instead, merely discusses the use of an itinerary, which can be
16 altered by a user, and for which is provided additional information, including maps
17 and/or restaurants. (Br. 31-32.)

18 As we concluded above, no patentable weight is afforded the contents of the
19 listing, and so these limitations will not define the claims over the art applied. But
20 even were patentable weight given to the nonfunctional descriptive material
21 limitations, Among sends confirmed arrangements to both the travel agent and
22 traveler (FF 14).

23 Since Among is creating a tour package, having the agent submit the individual
24 component payments is a predictable manner of payment. Since such payments
25 necessarily come from the agent, the amounts due would be net of the agent's

1 commission. The arrangements would have to be confirmed before the entire
2 package was finally assembled, since any unavailability resulting from lack of
3 confirmation would destroy the package's coherence, and thus payment would be
4 deferred until after confirmation. Thus, these claim limitations are a predictable
5 variation of Among, to which a person of ordinary skill would have seen the
6 benefits.

7 Therefore, we find the Appellants' arguments unpersuasive.

8

9 *Claims 26 and 27*

10 The Appellants separately argue claims 26 and 27, which call for getting
11 information from a reservation system in which a polling computer transfers
12 information to a central reservation system and a flight data server.

13 The Examiner found that Jones discloses a system with a first data processing
14 system, a database for storing a plurality of travel arrangements, a polling
15 computer for transferring data to a central reservation system, and a flight data
16 server, and that the travel system includes an air transportation subsystem (Answer
17 18).

18 The Appellants contend that the combination of Jones and Among fails to
19 disclose the claim features (Br. 32).

20 Jones describes polling from a computer, which transfers information to a
21 central reservation system and a flight data server (FF 04).

22 Thus we find the Appellants' argument unpersuasive.

23

CONCLUSIONS OF LAW

2 We find that the Appellants are correct that Lynch does not show determining
3 whether the user is a direct customer or a travel agent. This limitation is present in
4 all of claims 1-12 and 25-27. Thus, we conclude that Lynch does not anticipate
5 any of claims 1-12 and 25-27. Accordingly we do not sustain the Examiner's
6 rejection of claims 1-12 and 25-27 under 35 U.S.C. § 102(b) as anticipated by
7 Lynch.

We find that Among, unlike Lynch, does show determining whether the user is a direct customer or a travel agent. Further, Jones shows the various travel preferences, or parameters, that are claimed, or those that are claimed are predictable variations of Jones. Similarly, Jones shows the various information included in the claimed listings or the claimed listing information are predictable variations of Jones. Also Jones shows the polling of claims 26 and 27. We also find that the Examiner is correct in the motivation to combine the teachings of Jones and Among. Therefore, we find that the claimed subject matter of all the claims are obvious over the combined teachings of Among and Jones.

Accordingly we sustain the Examiner's rejection of claims 1-28 under 35 U.S.C. § 103(a) as obvious over Jones and Among.

DECISION

To summarize, our decision is as follows:

- The rejection of claims 1-12 and 25-27 under 35 U.S.C. § 102(b) as anticipated by Lynch is not sustained.

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- The rejection of claims 1-28 under 35 U.S.C. § 103(a) as obvious over Jones and Among is sustained.

3 No time period for taking any subsequent action in connection with this appeal
4 may be extended under 37 CFR § 1.136(a)(1)(iv).

AFFIRMED

9 hh

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11

12
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